IQView8
Touch Screen Display

IQView8

Description

The IQView8 is a touch screen display which provides an interface to the Trend system. It enables the user to view and adjust operating times, monitor alarms, make adjustments to controller parameters, and display graphs of logged data. Schematic displays provide the ability to view, change and graph data from colour graphics pages. Alarms can be sent directly to the IQView8 where they appear on a special display, an audible, and visual indication of the alarm is given.

The unit is panel mountable with surface and embedded mounting options available enabling the IQView8 to be mounted in a way suitable for its environment and use.
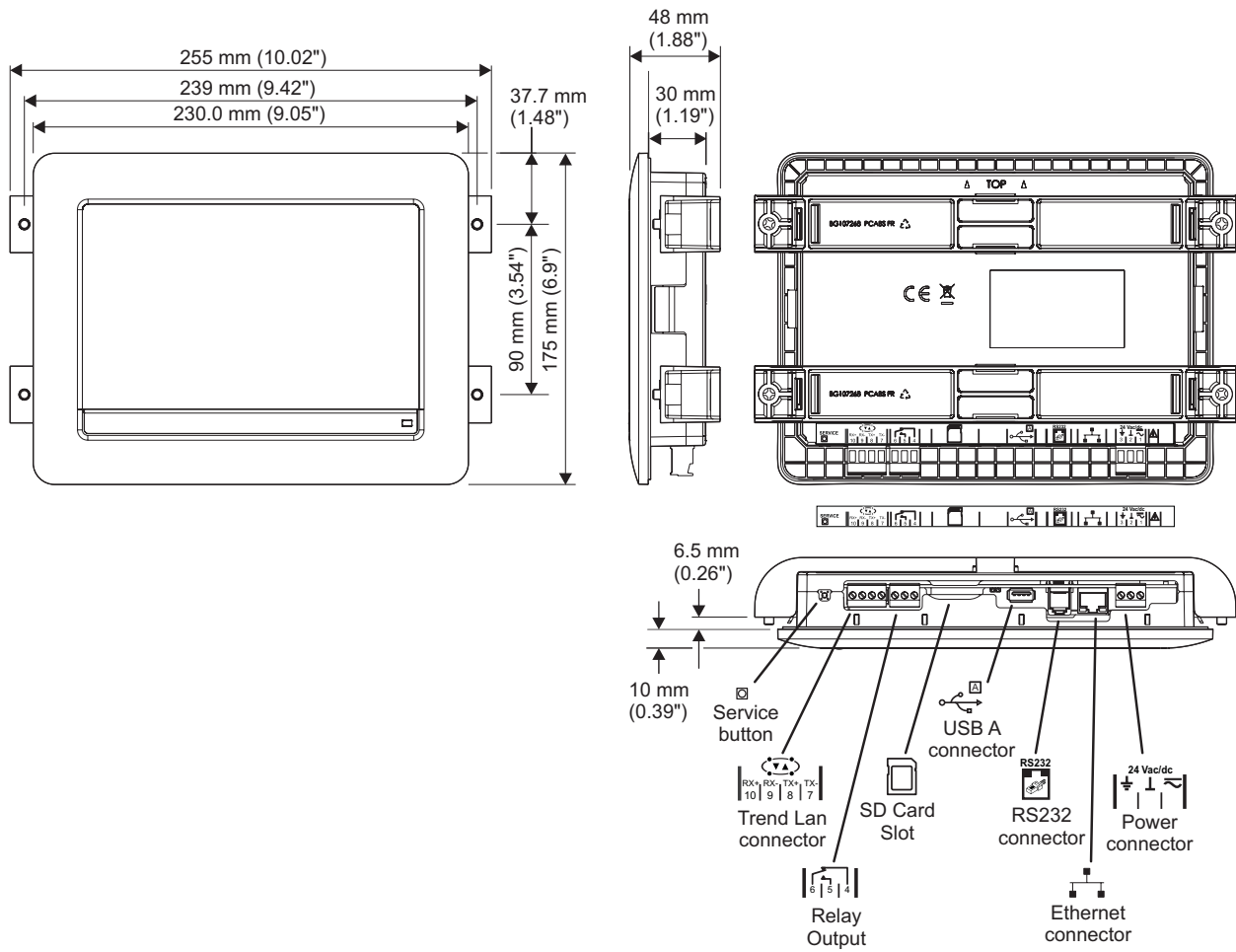
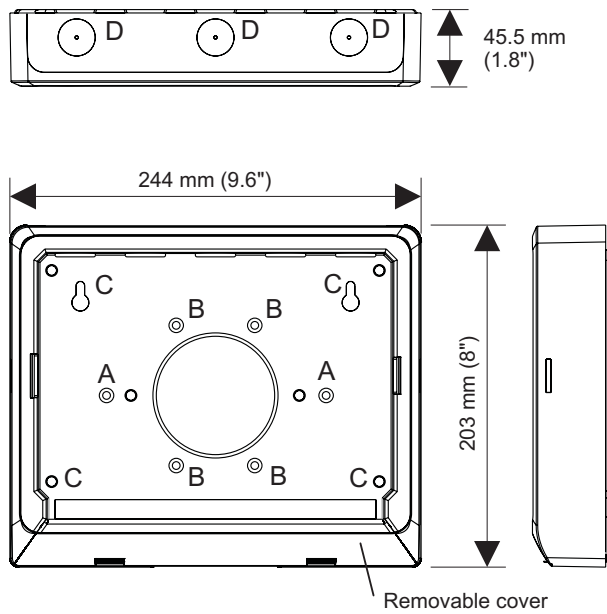A relay output is available for use with an alarm sounder.

Features

- Colour graphics pages (schematic)
- Viewing of inputs, outputs, directories, alarms, and plots
- Adjustment of knobs, switches, and time zones.
- Graphing of logged data
- Configurable users to ensure system security
- Communicates with all controllers on network (not autodialled networks)
- DHCP enabled
- Ethernet, current loop Lan, or RS232 network connection
- Panel, surface, or embedded mounting
- 8" 16:9 colour touch screen LCD display
- 24 Vac/dc input power supply
- Relay output (e.g. for use with an alarm sounder)
- IP65 (when panel mounted).

Physical

IQView8 (Panel mounting)

255 mm (10.02")
239 mm (9.42")
230.0 mm (9.05")

37.7 mm (1.48")

48 mm (1.88")

30 mm (1.19")

90 mm (3.54")
175 mm (6.9")

6.5 mm (0.26")

10 mm (0.39")

Service button

USB A connector

RX+ RX- TX+ TX-
10   9   8   7
Trend Lan connector

SD Card Slot

RS232 connector

24 Vac/dc
Power connector

6   5   4
Relay Output

Ethernet connector

IQVIEW8 SURFACE MOUNTING BOX (Surface Mounting)

D   D   D

45.5 mm (1.8")

244 mm (9.6")

C   C
B   B
A   A
C   B   B   C

203 mm (8")

Removable cover

A = UK patress box
B = USA patress box
C = Alternative mounting points
D = Cable gland drill outs
    22 mm Ø (0.86")

IQVIEW8 DRY PARTITION WALL BOX (In Wall Mounting)

234 mm (9.21")

220 mm (8.66")

60 mm (2.36")

170 mm (6.7")
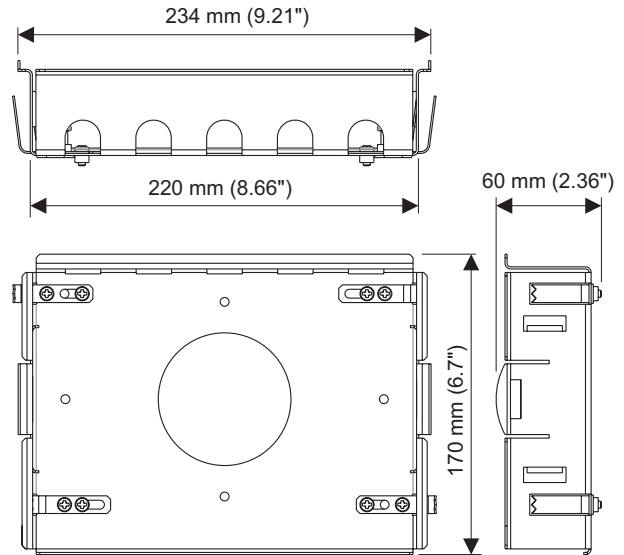
FUNCTIONALITY

The functionality of the IQView8 can be split into **Software**, **Trend Network Connection**, **Ethernet Addressing**, and **Hardware** sections.

SOFTWARE

The IQView8's software provides its functionality. It enables viewing/adjustment of operating times and device values, as well as the display of graphs, and alarms from an intuitive touch screen interface. It also enables the IQView8 to be configured.

The Task Launcher - Features screen is shown below:
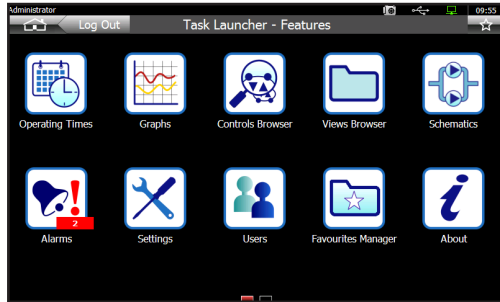
The Task Launcher - Features screen contains icons that enable the selection of the main features.

| Icon	Description
	Provides access to the schematics displays.
	Provides access to the operating times of controllers on the system.
	Provides access to graph views. From here graph views can be displayed, created or deleted. It also enables you to browse directly to any controller plot and display it as a graph.
	Provides access to the presentation modules (i.e. sensors, digital inputs, critical alarms (IQ1 and IQ2), knobs, switches, time zones, and drivers) and control loops of devices on the system to which the IQView8 is connected. From here the values can be viewed, adjusted, or graphed.
	Provides access to display and directory modules on the system to which the IQView8 is connected. From here the values can be viewed as a list of points or as a GraphIQ (where available).
	Provides access to alarms on the system/controller, and alarms received by IQView8.
	Allows the IQView8's settings to be viewed/configured. It also provides access to the facilities to upgrade the software, back up or restore the configuration, perform a restart, or access diagnostic information.
	Provides access to the IQView8's security features enabling the creation, deletion, and editing of the IQView8's users.
	Displays information about the IQView8 (i.e. Version, Build, Date, Start time).

A second Task Launcher screen the Task Launcher - Favourites screen contains favourites that have been set up for the current user allowing them easy access to frequently required information.

The IQView8's screens make use of graphics to provide information to the user, enable system navigation and viewing/adjustment of values with the minimum amount of text. IQView8 offers the following functionality accessed from the users home page.

Available functionality depends on the user's access rights and what features they have access to.

 Schematics

The IQView8 provides the user with colour graphics pages, which display information from the system and enable parameters to be adjusted and graphed.
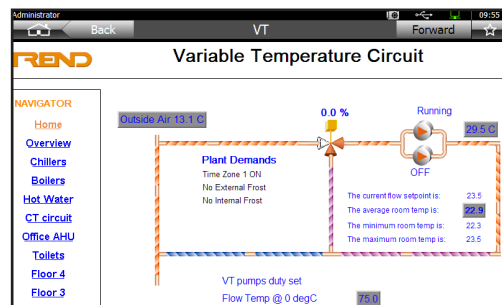

The pages may contain a backdrop, graphic images, animations. multi state graphics (ON, OFF, waiting, error, alarm, overridden ON, and overridden OFF), and static text. The security system enables access to particular pages to be restricted so that users are only presented with the necessary information.

The pages are engineered using 963 and exported for use with IQView8 using the 96x Schematic Export Utility.

 Operating Times

The IQView8 enables the user to make adjustments to the operating times in controllers. It allows adjustment of standard operating times, operating times for the current week, or setting up exceptions for the year ahead.
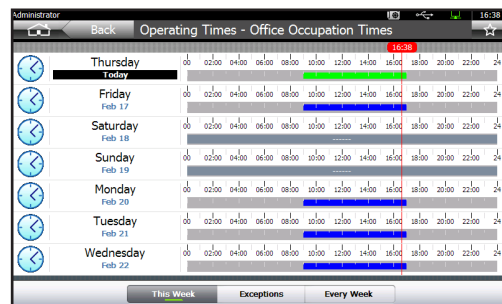
The interface provides a common view for all types of controllers. An easy to follow wizard guides the user through the process of changing times and configuring exceptions.

Graphs

IQView8 is able to display logged data from IQ controllers in multi-trace graphs. A single graph can contain multiple traces from different controllers enabling easy comparison of data. Any point logged in a controller can be graphed.
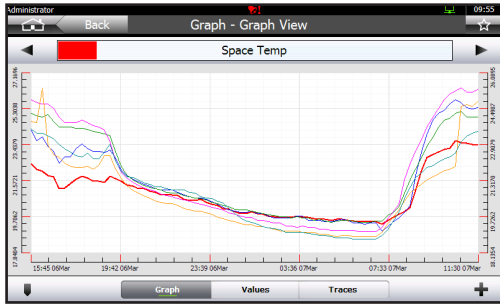

Graphs can accessed from the schematic pages, from a list of values on the system (Controls Browser), or from the display and directory navigation (Views Browser). It is possible to zoom in on selected parts of the graph, display spot values, or view the underlying data.

The configuration of a graph can be saved and viewed again (with the latest data). Saved graphs allow quick access to regularly used graphs; each saved graph view can have multiple traces, and can be set up to look as required.
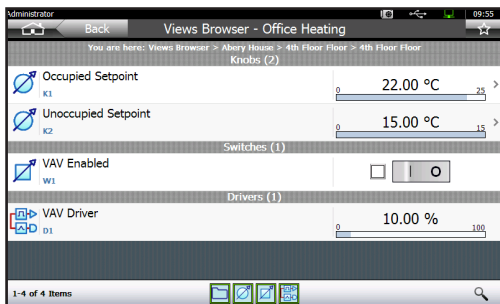
View Controller Data

Values of module parameters from presentation modules (i.e. sensors, digital inputs, critical alarms (IQ1 and IQ2), knobs, switches, loops, time zones, and drivers) from devices on the system to which the IQView8 is connected can be viewed using either the Controls Browser, or the Views Browser.

Controls Browser
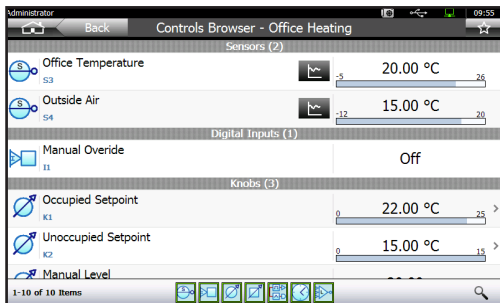
Views Browser

The Controls Browser displays a list of sensor, digital input, critical alarm, knob, switch, timezone, driver, and loop modules Once the values are displayed they can be viewed, adjusted, or graphed as appropriate depending on the type of value.

The Views Browser enables the display and directory modules in the selected controller to be accessed, and provides the facility to view the GraphIQs (where available).

Alarm Handling

IQView8's alarm handling features available in the Alarm Browser notify the user of alarms that have occurred.

IQView8 is able to receive alarms from devices on the Trend system (**Received Alarms**) or the user can browse the network to view alarms in a particular device (**Alarm Browsing**).

Received Alarms

IQView8 provides a rolling alarm log of 200 entries. The alarm log is not maintained through a power cycle. When an alarm is received IQView8 can perform one or more of the following actions:

> log receipt
> flash the screen
> sound the internal beeper
> activate the on-board relay
> flash the front-panel LED.

A flashing alarm icon in the Title Bar indicates that an alarm has been received. In addition the alarm icon on the Task Launcher Screen indicates the number of unacknowledged alarms.

Alarms are grouped into categories. The alarm actions for each category can be configured.

The alarm actions will continue until all the alarms have been actioned by the user. The user can snooze the alarms which will temporarily stop all alarm actions.

The received alarms can be viewed in two different ways:

> as a list (Alarm Log Screen)
> grouped by category (Alarms Summary Screen)

Alarm Log Screen
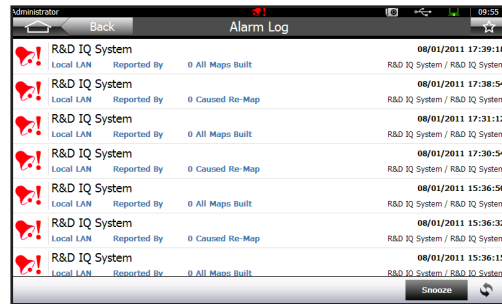
Alarms Summary Screen

Unactioned alarms can be viewed, and actioned, or snoozed from the Unactioned Alarms Screen.

🔔 Alarm Handling (continued)
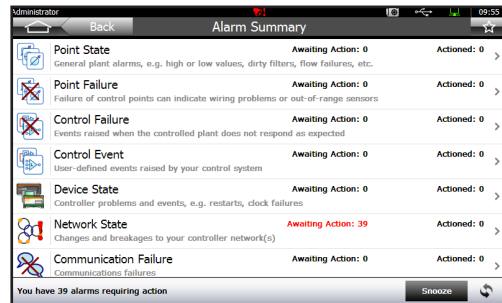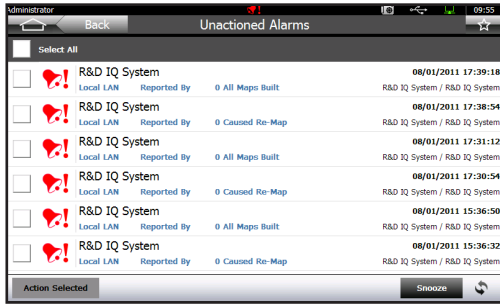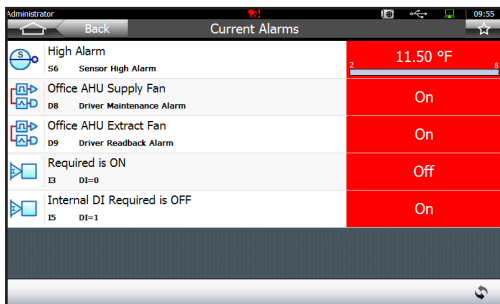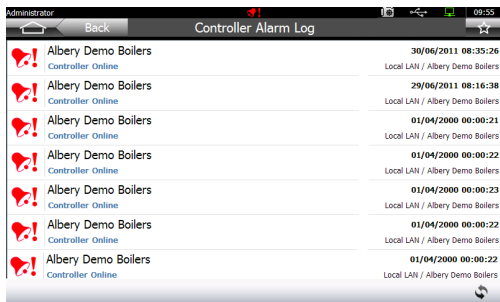
Unactioned Alarms Screen

Alarm Browsing

Alarm browsing enables the user to view the current alarms, or the alarm log in a controller on the network.

Controller Current Alarms Screen

Controller Alarm Log Screen

👥 Security

IQView8 can be operated with or without security.

When operating without security it is not necessary to provide a username and password in order to access the unit. Anyone will have full access to all of IQView8's features.

When security is enabled it is necessary to log in using a user name and password, and the features available to the user are determined by the user's access rights. There are two users set up by default, the Administrator and Guest.

Each user has a user name, password, level of authority (PIN level), language, and access rights. The access rights determine which of the IQView8's features they have access to.

The IQView8's user security prevents unauthorised access to IQView8's features. Changes made to module parameters in IQ controllers may also be protected by the controller's own security.

Backup and Restore

All or part of IQView8's configuration can be saved to a USB memory stick. The USB memory stick may be removed and stored in a safe location as a back up, or reused to configure another IQView8.

Software Upgrade

The software can be upgraded using a USB memory tick and the unit's upgrade feature.

TREND NETWORK CONNECTION

The IQView8 is designed to connect to a single Trend site communicating with the other devices to obtain data and make changes. It can also receive alarms sent from other Trend devices. IQView8 is not designed for muti-site operation. It cannot access autodialled sites (e.g using a TMN), and it cannot receive alarms from sites using autodialling or TCP/IP dial up. The connection to the Trend network can be made in one of three ways, **Ethernet**, **current loop Lan**, or **RS232**.

Ethernet

The IQView8 can connect to the Trend network over Ethernet. When connecting in this way it can connect using its own **internal vCNC** or a **virtual CNC (vCNC) in another device**.
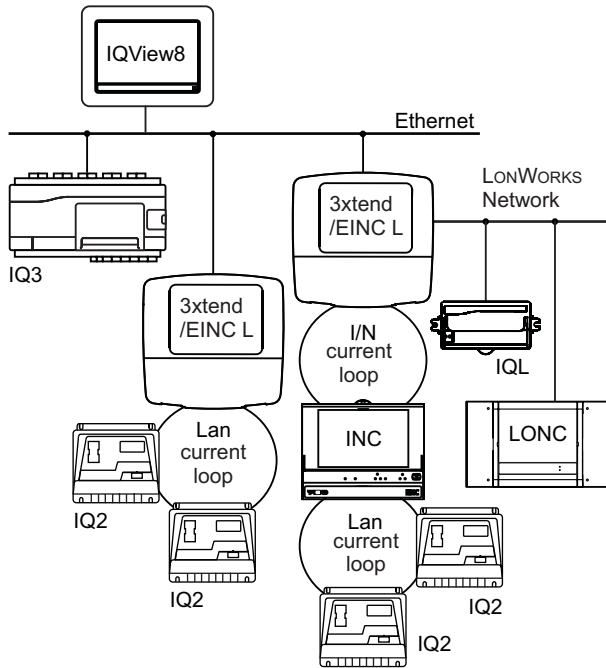

In the diagram the IQView8 is connected using its integral vCNC. It can access the IQ3 on the Etherent network, and the IQ2s on the current loop Lan via the 3xtend/EINC L. It can also connect using the second 3xtend/EINC L to another current loop Lan and to some IQLs on a LONWORKS® network. Connection using a vCNC in another device provides the same connectivity.

Connection using integral vCNC
When connecting using its integral vCNC IQView8 exists on the network with its own address on the Trend network enabling it to build Lans and internetworks with other devices, and it to receive alarms from other Trend devices sent to that address. It must have its Lan number, network address and UDP port setup. UDP port must be the same as other devices on the network.

Building Lans: When using its integral vCNC IQView8 will build a Lan with other Trend devices on the same segment with the same Lan number and UDP port.
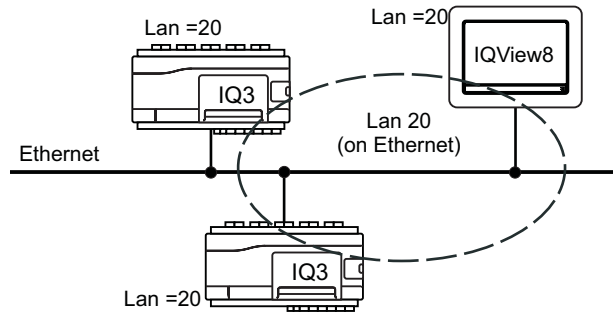
In the example the IQView8 has the same Lan number (20) as the IQ3 controllers and will build a Lan (Lan 20) with them.

Building internetworks: If the IQView8's IP address is the lowest of the devices on its Lan it will take on the role of INC and automatically build an internetwork with other Trend internetwork devices on the same segment of the Ethernet network (no routers between them) that use the same UDP port. In the diagram below the IQ3 controllers and the IQView8 are on the same network segment but have different Lan numbers. Therefore they form an internetwork consisting of Lans 20, 21, 22, and 23.
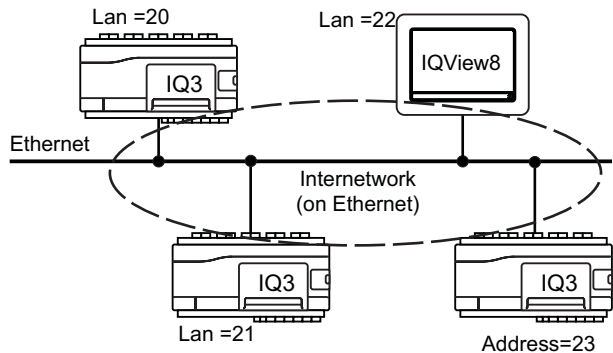
If there are routers between the IQView8 and other devices that internetwork is to be built with another devices must be configured to build internetworks across routers (cross router master). This is done by specifying the IP address and subnet mask of a device on the other side of the router that is to form part of the internetwork in the remote devices table. IQView8 is not able to be the cross router master.
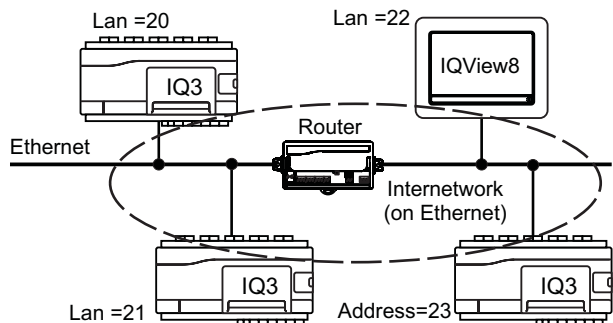
In the above diagram, one of the IQ3s has the lowest IP address on its subnet therefore it should be configured with the IP address and subnet mask of a device the other side of the router, enabling it to build the internetwork across the router.

Ethernet (continued)

If automatic addressing is being used the devices in the remote devices table must be specified in the other devices using their host names and subnet mask. In order to maintain the network in the event of a failure of one of the devices used to build the internetwork the details of two devices in the internetwork from each other subnet should be set up in every device on the local subnet.

Connection using vCNC in another device

When connecting using a vCNC in another device IQView8 takes the network address of the vCNC enabling it to receive alarms from Trend devices on the network sent to that address. It must be configured with the IP address of the device containing the vCNC to which it is to connect and the vCNC's port number.

Physical connection

The physical connection the Ethernet network is made using a standard Ethernet cable (Cat 5e unshielded) to an Ethernet hub. It can also connect directly to the Ethernet port of an IQ controller (dependant on controller type) This connection type requires the controller vCNC to be set up and will provide access to the rest of the network.

RS232

IQView8 can connect to the Trend network by connecting to an IQ controller's (IQ1xx, IQ2xx, IQ4, or IQ3) local supervisor port, or to a CNC (e.g. NBOX/CNC2) using its RS232 connector. IQView8 takes the network address of the local supervisor port or CNC to which it is connected enabling it to receive alarms from Trend devices on the Trend network sent to that address.

The diagram shows an IQView8 (A) connected to an IQ2xx with its supervisor port set up to allow network access. This gives the IQView8 access to the local Lan and across the internetwork to the other Lans including those on the LONWORKS network.
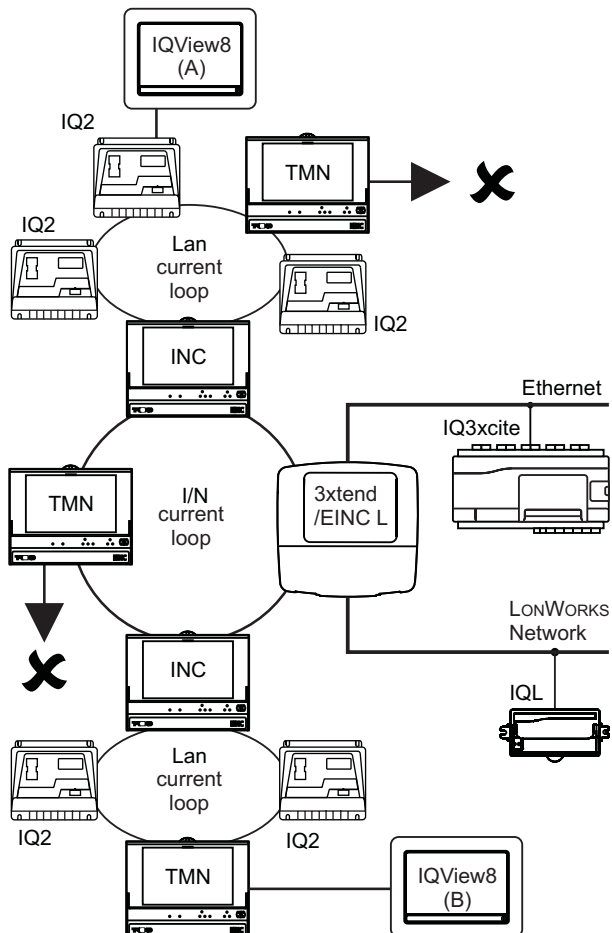
A second IQView8 (B) is connected to the network through a CNC. This has similar access to the previous one and takes the address set up on the CNC's address switches and the Lan number of the CNC's local Lan

In both cases it is not possible to access sites using the autodialled links, as IQView8 only supports connection to a single site.

Note that for IQ1xx and IQ21x controllers the local supervisor port will give access only to that controller, but for all other IQ2xx, IQ3 and IQ4 controllers it can provide access to the Trend network providing it is been configured to do so.

Physical connection

Connection of IQView8 using its RS232 connector requires use of the appropriate cables as described in the table:

Connecting to	Cable Required
IQ4 IQ3 IQ2xx IQ1xx with RJ11 connector	RJ11 to RJ11 adapter cable with a twist (CABLE/EJ105650).
CNCs IQ1xx with 25 Way D type connector	RJ11 to 25 Way D type male adapter cable (CABLE/EJ105651).
IQ1xx with 5 way in-line connector	RJ11 to 25 Way D type male adapter cable (CABLE/EJ105651) in conjunction with the 25 way socket to 5 in-line socket adapter cable (CABLE/78-1172).

Current Loop Lan

The IQView8 can connect to the Trend network by connecting directly to the current loop Lan using its Lan connector. The IQView8 exists on the network and has its own address on the Trend network enabling it to receive alarms from Trend devices on the Trend network sent to that address. It must have its network address set up as well as having the baud rate set to match the Lan's baud rate.

This type of connection gives the same range of access to the network as that when using an **RS232** connection.

Physical connection

Connection of IQView8 using its Lan connector requires use of twisted pair cable between the IQView8 and other devices on the network.

ETHERNET ADDRESSING

The IQView8's Ethernet addressing information (IP address, subnet mask, default router, and WINS Server) can be set up automatically (**automatic addressing**) or manually (**manual addressing**). Automatic addressing enables it to operate on an Ethernet system where the IP addressing information is automatically allocated by a Dynamic Host Configuration Protocol (DHCP) server, or specified manually. Manual addressing enables it to operate on a system where the addressing information is defined manually and a DHCP server is not available. The default mode of operation is automatic addressing enabling the IQView8 to be easily set up.

Automatic Addressing

When in auto addressing mode the IQView8 obtains IP addressing information (IP address, subnet mask, default router, and WINS Server) from a DHCP server. This means that its IP address and other IP addressing information may change.

If there is no DHCP server, or the DHCP server fails, the IQView8 enters link/local mode where it auto-negotiates its IP address with other devices on its Ethernet segment. There may be a delay between DHCP server failure and the IQView8 entering link/local mode as it will only prompt the DHCP server after its lease has expired which may be a long time.

Link/Local Operation: When in link/local mode IP addresses start at 169.254.0.0 with subnet mask of 255.255.0.0; ensuring all devices in link/local mode are on the same subnet, the default router, and WINS server address remain at their last settings. Any devices wanting to communicate with them using IP addressing must be on this subnet.

IQView8 and most other Trend Ethernet devices are set to automatic IP addressing by default. If a group of these devices are connected together on an Ethernet segment (without DHCP, WINS servers) they will power up in link/local and auto-negotiate their IP addresses. If set up with network addresses and Lan numbers they will construct a Trend network. A supervisor or tool running on a PC on the same segment will be able to communicate with them using host names (if the PC is set up for auto-addressing). Such a system cannot form a network across a routers; this would require the setting up of DHCP and WINS servers and the remote devices table.

Fixing the IQView8's address on a DHCP controlled System: It is possible for the IQView8 to operate in a DHCP regime with a fixed IP address by setting up the DHCP server so that it always gives the IQView8 the same IP address. An alternative is to set the IQView8 to use manual addressing and set its IP address outside the range of the DHCP server.

Communicating with an automatically addressed IQView8: Because the IQView8's IP address may not remain the same any connection to it over Ethernet, e.g. to send alarms, must use a host name. For more details see '**Host names**'.

Crossing Routers if DHCP is operating: In the DHCP regime, if the internetwork is to be built across a router(s), the devices in the remote devices table must be specified using their host name and subnet mask.

Manual Addressing

When in manual addressing mode the IQView8's IP addressing information (IP address, subnet mask, default router, and WINS Server) are specified manually (i.e. the IP address is fixed).

Communicating with a manually addressed IQView8: Communication with an IQView8 can be made using either the host name or IP address. For more details see '**Host names**'.

Crossing Routers

If the internetwork is to be built across a router(s), one or more devices must be configured so that they are capable of becoming the cross router master by specifying their remote devices table. The devices in the remote devices table can be specified using their host names and subnet mask, or IP address and subnet mask, for DHCP systems host names must be used.

The remote devices table must contain the details of the two devices with the lowest IP address in the network from each other subnet and be set up in every device on the local subnet. For increased reliability, details of additional devices should also be set up.

Note that IQView8 cannot act as the cross router master as it does not have the facility for a remote devices table. It can form an internetwork across routers providing there is another device acting as the cross router master.

Use Across Routers

If the connection is to be across routers a Windows Internet Naming Service (WINS) server must be used to enable the device communicating with the IQView8 to obtain its IP address. Each device must be set up with the IP address of the WINS server. The IQView8 sends its host name to the WINS server on power up. Devices wishing to communicate with IQView8 send the host name to the WINS server which returns the associated IP address.

If a WINS server is not present the host name can only be used over the local segment (i.e. not across routers).

Use in a DHCP Regime

Because the IQView8's IP address may not remain the same the host name must be used to communicate with the IQView8 when automatic addressing is being used.

Host names

The IQView8 has a host name, which provides a user friendly method of accessing the IQView8 e.g. to send an alarm, or build an internetwork across routers in a DHCP regime. Teh host name should be used to address the IQView8 when its IP address may vary e.g automatic addressing.

The host name defaults to TREND_xx_yy_zz where xx, yy and zz are the last 3 groups of number in the IQView8's MAC address.

HARDWARE

Mounting

The IQView8 can be **panel**, **surface**, or **in wall mounted** (embedded).

Panel Mounting

The IQView8 is designed for rear panel mounting, and can be mounted by simply cutting the required cutout, clipping the unit into the hole, and fixing the mounting brackets. When correctly mounted in this way the unit has an IP rating of IP65 from the front when the panel is closed.

The assembly consists of the main unit, a gasket, and 2 mounting brackets. It requires 230 mm (9.05") x 175 mm (6.9") of space on the outside of the panel plus 21 mm (0.82") to the left and right and 35 mm (1.38") at the bottom on inside of the panel for the mounting brackets and cable connections.

The unit is self retaining on panels up to 2 mm (0.08") thick, the normal thickness of a metal panel. This enables it to be easily mounted by one person. It can be mounted on panels up to 5 mm (0.2") thick. In this situation it is not self retaining and will require support while the mounting brackets are fitted.

The power and networking cables can be run into the panel and then directly to the IQView8, Access to the USB connector and memory card slot require the panel to be opened.

Surface Mounting

The IQView8 can be mounted on a wall or on a panel (without the need to cut holes) using the surface mounting kit (IQVIEW8 SURFACE MOUNTING BOX), simply by mounting the surface mounting enclosure and clipping the IQView8 into it. When mounted in this way the unit has an IP rating of IP30.

The surface mounting kit consists of the surface mounting enclosure and access lid. It requires 243.5 mm (9.6") x 202.5 mm (8") of space, plus space for cable glands and cables if used above the unit. It has fixing centres that enable it to be mounted on a standard UK or USA double pattress box using 2 or 4 hole fixing respectively. It also enables mounting on any suitable flat surface using a 4 hole fixing.

When mounted onto a pattress box the power and networking cables can be run from the pattress box into the rear of the surface mounting enclosure, or directly into the surface mounting enclosure using the 22 mm drill outs. When mounted on a flat surface the power and networking cables can be run into the surface mounting enclosure using the 22 mm drill outs.

The drillouts are suitable for standard 20 mm cable glands (not supplied) in the top of the surface mounting enclosure. These drill outs have a drill centre to aid drilling.

In Wall Mounting

The IQView8 can be embedded in a dry partition wall with panels of between 9.5 mm (0.35") and 25 mm (0.98") thick using the in wall mounting kit (IQVIEW8 DRY PARTITION WALL BOX). The wall must be able to allow a hole of at least 55 mm (2.17") for the in wall mounting chassis. Mounting requires cutting the necessary hole in the wall, mounting the in wall mounting chassis and clipping the IQView8 into it. When mounted in this way the unit has an IP rating of IP30.

The in wall mounting kit consists of the in wall mounting chassis and retaining straps and requires 230 mm (9.05") x 175 mm (6.89") of space on the wall plus 12 mm (0.475") to the left and right and 35 mm (1.38") at the bottom on the inside the wall for the retaining straps and connections.

The power and networking cables can be run from inside the wall into the rear of the in wall mounting chassis, or through the open bottom edge of the in wall mounting chassis.

Power Supply

The unit requires a 24 Vac ±15%, 50/60 Hz, 20 VA (minimum) supply or a 24 Vdc 440 mA, 10.5 W minimum supply. For dc a dc supply with a minimum output of 600 mA is recommended.

Note that this power level cannot be provided from an IQ controller's auxiliary supply output; a separate supply is required.

A 230 V/24 Vac, 36 VA, transformer is available (ACC/24VAC). This is a sealed unit with two mounting lugs; it has an isolated 24 Vac output and an additional earth (ground) lead connected through from its input power supply earth (ground) to the 24 Vac output earth (ground) for earthing (grounding) the IQView8.

A general purpose 24 Vac transformer may be used to supply the IQView8, but if one side of its output is earthed (grounded), this side must be connected to the IQView8's central power inlet pin (2) or similar.

The IQView8 must be earthed (through its input power supply earth (ground) terminal). For the UL rating the input power connections must be made using 18 AWG or larger wire rated at least 90ºC.

The 24 V supply must include a suitably rated switch in close proximity and be clearly marked as the disconnecting device for the unit.

Fusing

The input supply is protected by a 3.15 A fast-blow fuse; this protects the IQView8 board from drawing excessive current from the supply. If it blows the unit should be returned to the supplier for repair.

Current Loop Network

The network terminals facilitate connection of 2 wire cables. There is a network bypass relay, and network alarm generation.

The IQView8's network address and baud rate on the current loop Lan are set in the application software, there are no hardware switches.

Indicators

The following indicators are on the unit:

> **System status:** (Red, Green, or Orange) dependent on status. Orange = Normal operation, Green = power save, Red = alarms have been received .

> **Ethernet LINK:** (green) ON if the IQView8 has a good Ethernet connection. OFF it indicates a faulty Ethernet connection.

> **Ethernet DATA:** (yellow) Flashes when a package of data is being received from the Ethernet.

Sounder

The sounder can produce a key click when the touch screen is tapped while in schematics, if the key click is enabled. By default the key click is disabled. It can be enabled using the application software.

Power failure protection

The IQView8 does not require a battery. Configuration data is stored to the supplied 2 Gbyte memory card. It's database will be restored after power failure; this includes the presentation modules discovered in the controller (i.e. sensors, drivers etc) and any customer settings including Users, language etc. Received alarms are not restored after a power failure.

HARDWARE (continued)

Display

The IQView8 has a 8" 800 x 480 pixel high colour (16 bit) LCD Transmissive colour display. The backlight is LED with autodim. The autodim function enables the screen brightness to be dropped to ½ brightness after a user definable backlight delay time (auto dim off, or 1, 2, 3, 4 or 5 minutes).

The screen should only be tapped using a finger, no sharp objects (e.g. screwdriver) or pointers should be used. Failure to comply may damage the unit.

Connectors

IQView8 has the following connectors:

> **RS232:** The RS232 connector is an RJ11 socket used for a serial connection to the Trend network.

> **Ethernet:** The Ethernet connector is an RJ45 socket used for an connection to the Trend network over Ethernet.

> **Trend Lan:** The RS232 connector is a 2 part 4 wide screw terminal connector used for connection to the Trend network using the current loop.

> **Power:** The power connector is a 2 part 3 wide screw terminal connector used for connecting the unit to the power supply.

> **USB:** Standard USB A connector for memory stick. USB stick maximum size 2 Gbyte, fully formatted FAT/FAT32.

> **Memory card slot:** Memory card slot suitable for SD/MMC card. Unit suppled with 2 Gbyte memory card which is used for storage of configuration data.

> **Relay output** The relay output connector is a 2 part 3 wide screw terminal connector. It is normally used for connection to an audible alarm sounder.

Two part connectors are used throughout to facilitate installation.

Relay output

The IQView8 has a single changeover relay output. If the relay is enabled, it energises when an alarm occurs. It is disabled by default, but can be enabled using the software. Acknowledging the alarm will de-energise the relay.

The relay can be used to drive an external alarm annunciator (visual or audible).

The relay contacts are not to be connected to 230 V mains and should be limited to 24 Vac (30 Vac max).

Service Button

The service button when pressed during power up provides access to the units factory configuration settings. This feature should only be accessed when instructed by Trend Technical Support.

FIELD MAINTENANCE

The IQView8 requires virtually no routine maintenance. The unit should be cleaned with a cloth moistened with water in order to avoid buildup of dust or other contaminents. **Disconnect power before carrying out any cleaning**.

The screen should be cleaned regularly to remove dust and grease by wiping gently with a soft cloth such as that used for spectacles.

DISPOSAL

COSHH (Control of Substances Hazardous to Health - UK Government Regulations 2002) ASSESSMENT FOR DISPOSAL OF IQView8.

RECYCLING ♻.
All plastic and metal parts are recyclable. The printed circuit board may be sent to any PCB recovery contractor to recover some of the components for any metals such as gold and silver.

WEEE Directive:
At the end of their useful life the packaging, and product should be disposed of by a suitable recycling centre.
Do not dispose of with normal household waste. Do not burn.

COMPATIBILITY

The IQView8 can connect to a single Trend site. It will show any device, and identify those who respond to W comms. Autodialled Lans and remote Ethernet sites cannot be accessed.

Controllers: IQView8 is compatible with IQ1xx controllers version 6.5 and above and all IQ2xx, IQ3, IQ4, IQeco, and IQL controllers. FNC/FC controllers are not supported.

Alarms: IQView8 supports general, item, critical, and network alarms from devices on the network. It supports alarms retransmitted from 962/963, however alarms retransmitted from earlier supervisors (e.g. 945) are not supported. IP alarms from IQ3 and IQ4 controllers are not supported.

NKSV and BBUF notifications are ignored.

Timezones: IQView8 can view and adjust the operating times in IQ1, IQ2, IQ3 and IQ4 controllers. For IQ1 and IQ2 controllers it can adjust the standard and current weeks, and when supported by the controller set up and adjust the Holiday Calendar times. For IQ3 and IQ4 controllers it can adjust the normal week, and set up and adjust the exception times.

IQView8 will not discover modules without labels.

Plots: IQView8 supports synchronised, triggered, and periodic plots.

Supervisors/Tools: IQView8 will be learnt by SET, and 963 and appear in the navigation tree.

Network connection: IQView8 supports connection to the Trend network using Ethernet, current loop Lan, or RS232 to suitable a network node.

Schematics: IQView8 supports schematic pages exported from 963 using the 96x Schematic Export Utility. See the 96x Schematic Export Utility Manual (TE201242) for a full list of supported 963 actions.

GraphIQs: It supports the display of GraphIQs from IQ3 and IQ4 controllers. The 'clickable' action available on GraphIQs is not supported by IQView8. This means that links to module detail pages, module type pages, web pages, other GraphIQs and email will not work.

INSTALLATION

The IQView8 is designed for rear panel mounting. A rectangular cutout needs to be made in the panel then the unit can be inserted into the hole and fixed into place using the two mounting brackets. Use of the surface mounting or in wall mounting kit enables the unit to be either surface or in wall mounted.

All units are UL rated as 'UL916, listed open energy management equipment'.

The procedure involves:

> Mounting the unit
> Running necessary power, communications, and relay (optional) connections
> Connecting power (do not power up), communications, and relay wiring
> Reading 'End User Licence Agreement'
> Powering up
> Configuring the unit
> Testing the unit's configuration.

A full description of installing the unit is given in the IQView8 Installation Instructions (TG201232).

CONNECTIONS

Memory Card Slot

Supplied with 2 Gbyte memory card used for configuration data. Memory card must be left inserted.

USB A Connector

Used for connection of USB memory stick.

Current Loop Lan Connector

2 wire

4 wire

additional terminals

Input Power Connector

For UL compliance the input power connections must be made using 18 AWG or larger wire rated at least 90°C.

For USA/Canada use a UL Listed, Class 2, 24 Vac transformer

24Vac   24Vdc

24 Vac/dc   **24 Vac/dc**

24 Vac   0 V   24 Vdc

WARNING: This apparatus must be earthed (grounded). using earth (ground) terminal.
Do not apply 230V mains power to this unit.

Relay Output Connector

For UL rating CU only cable must be used

Load on when alarm present, (Relay energised)

power

load

Load on when Alarm not present, (Relay off)

power

load

Ethernet Connector

100 m, 109 yds (max)

Standard Ethernet cable (Cat 5e unshielded)

Ethernet

RS232 Connector

For IQ4, IQ3, IQ2xx, and some IQ1xx

RJ11 to RJ11 crossover cable CABLE/EJ105650

For CNC, IQ1xx with 25 way D type socket

RJ11 to 25 way D type male crossover cable CABLE/EJ105651

For IQ1xx with 5 in line plug

RJ11 to 25 way D type male crossover cable CABLE/EJ105651

25 way D type to 5 in line socket cable CABLE/78-1172

WARNING: Do not attempt to supply power through the RS232 connector. This will cause damage to the unit.

ORDER CODES

IQVIEW8/24	IQView8 including 2GB memory card.
IQVIEW8 SURFACE MOUNTING BOX	Kit for mounting IQView8 on a flat surface or double UK or USA pattress box.
IQVIEW8 DRY PARTITION WALL BOX	Kit for mounting IQView8 embedded in an dry partition wall.
CABLE/EJ105650	RJ11 plug to RJ11 plug with crossover to connect to IQ4, IQ3, IQ2xx, and IQ1xx controller's with RJ11 local supervisor port connector.
CABLE/EJ105651	RJ11 to 25 way D type male to connect to IQ1xx controller's with RJ11 local supervisor port connector and to a CNC.
CABLE/78-1172	25 way D type female to 5 in line socket adapter to connect to IQ1xx controller's with 5 in-line local supervisor port connector. Should be used in conjunction with CABLE/EJ105651).
ACC/24VAC	230/24 Vac, 36 VA, transformer for IQView8 with surface mounting lugs, and through earth (ground) connection.

SPECIFICATION

ELECTRICAL

CPU	:Freescale iMX257
CPU speed	:400 MHz
Memory	:128 Mbytes DDR2
Input Power Supply	:24 Vac ±15%, 50/60 Hz or 24 Vdc ±10%
Power consumption	
24 Vac	:20 VA max.
24 Vdc	:440 mA, 10.5W
Mains failure protection	:User configuration data is stored in internal flash.
Display	:800 x 480 pixel high colour (16 bit) LCD Transmissive colour display with touch screen.
Backlight	:LED with autodim.
Sounder	:Piezo electric - SPL 85 dBA @ 1 m
Relay output	:Single pole changeover relay. AC rating 60 VA (30 Vac max at 2 A, 24 Vac at 2.5 A). DC rating 60 W (40 Vdc max at 1.5A, 24 Vdc at 2.5 A). *Note that UL rating applies up to 30 V maximum @2A*.
Ethernet port	
Transmission	:10/100 BASE-T autonegotiated
Distance	:100 m, 109 yds to hub
RS232 port	
Transmission	:RS232, EIA/TIA,232E, V28
Distance	:10 m
Baud rate	:Settable by software to 1k2, 4k8, 9k6, 19k2, 38k4 baud (normally 9k6). Set to match connected device.

Current loop Lan

Transmission	:20 mA, two wire current loop, opto-isolated, polarity independent receiver, balanced transmitter.
Distance	:Distance between units dependent on baud rate and cable type (see below).

Cable	1k2 baud	4k8 baud	9k6 baud	19k2 baud	No. of Wires
Belden 9182	1000 m (1090 yds)	1000 m (1090 yds)	1000 m (1090 yds)	700 m (765 yds)	2
Belden 9207	1000 m (1090 yds)	1000 m (1090 yds)	1000 m (1090 yds)	500 m (545 yds)	2
Trend TP/1/1/22/ HF/200 (Belden 8761)	1000 m (1090 yds)	1000 m (1090 yds)	700 m (765 yds)	350 m (380 yds)	2
Trend TP/2/2/22/ HF/200 (Belden 8723)	1000 m (1090 yds)	1000 m (1090 yds)	500 m (545 yds)	250 m (270 yds)	4

Baud rate	:Software settable to 1k2, 4k8, 9k6, 19k2 baud. Set to match other nodes on Lan.
Indicators	
System Status	:LED, Red, Green, or Orange dependent on status.
Ethernet LINK	:Green LED
Ethernet RX	:Yellow LED

MECHANICAL

Dimensions
    IQView8 (inc bracket)
        :255 mm (10.02") x 175 mm (6.9") x 48 mm (1.88")
    IQVIEW8 SURFACE MOUNTING BOX
        244 mm (9.6") x 203 mm (8") x 46.5 mm (1.83")
    IQVIEW8 DRY PARTITION WALL BOX
        234 mm (9.21") x 170 mm (6.7") x 60 mm (2.36")
Weight
    IQView8
        1.07 kg, 2.36 lbs
    IQVIEW8 SURFACE MOUNTING BOX
        0.53 kg, 1.17 lbs
    IQVIEW8 DRY PARTITION WALL BOX
        0.265 kg, 0.58 lbs
Material
    IQView8
        Mainly PCABS FR
    IQVIEW8 SURFACE MOUNTING BOX
        Mainly PCABS FR
    IQVIEW8 DRY PARTITION WALL BOX
        Chassis 1.2 mm ROSH compliant black zinc plated mild steel.

Connectors

Ethernet	:RJ45
Current Loop Lan	:4 wide 2 part connector with screw terminals for 0.5 to 2.5 mm² cross section area (20 to 14 AWG) cable.
RS232	:RJ11 (FCC68).
Input Power Supply	:3 wide 2 part connector with screw terminals for 0.5 to 2.5 mm² cross section area (20 to 14 AWG) cable.
USB	:Standard USB A connector.
Memory card slot	:Memory card slot suitable for SD/MMC card. Unit suppled with 2 Gbyte memory card.
Relay output	:3 wide 2 part connector with screw terminals for 0.5 to 2.5 mm² cross section area (20 to 14 AWG) cable

ENVIRONMENTAL

EMC	:EN61326 -1: 2006	Altitude	:<2000 m (6562')
Immunity	:Table 2 For equipment used in industrial locations	Protection	
Emissions	:Class B	Panel mounting	:IP65 (from front if correctly mounted with panel closed)
Safety	:EN60950-1:2006	Surface mounting	:IP30
CB Certification Scheme	:Certificate number NO68111	In wall mounting	:IP30
USA	:UL rated as 'UL916 listed open energy management equipment' (E219709).		
Canada	:CSA22.2 No. 205-M1983 - Signal Equipment		
Ambient limits			
Storage Temp	:-20 °C (-4 °F) to +70 °C (158°F)		
Storage Humidity	:0 to 85 %RH non-condensing up to 40 °C (104 °F)		
Operating Temp	:-10 °C (14 °F) to 60 °C (140 °F)		
Operating Humidity	:0 to 85 %RH non-condensing up to 40 °C (104 °F)		

Please send any comments about this or any other Trend technical publication to techpubs@trendcontrols.com

Trend Control Systems Limited

Albery House, Springfield Road, Horsham, West Sussex, RH12 2PQ, UK. Tel:+44 (0)1403 211888 Fax:+44 (0)1403 241608 www.trendcontrols.com

Trend Control System USA

6670 185th Avenue NE, Redmond, Washington 98052, USA. Tel:(425) 869-3900 Fax:(425) 869-8445 www.trend-americas.com